

Development of a protocol for studying premature onset of fear responding: The effects of CS duration and counting behavior

Yannick Boddez*, Joke Gijbels*, Frank Baeyens*, & Tom Beckers*[†]

yannick.boddez@ppw.kuleuven.be

*Centre for the Psychology of Learning and Experimental Psychopathology, KU Leuven, Belgium

[†]Department of Clinical Psychology, UvA, the Netherlands

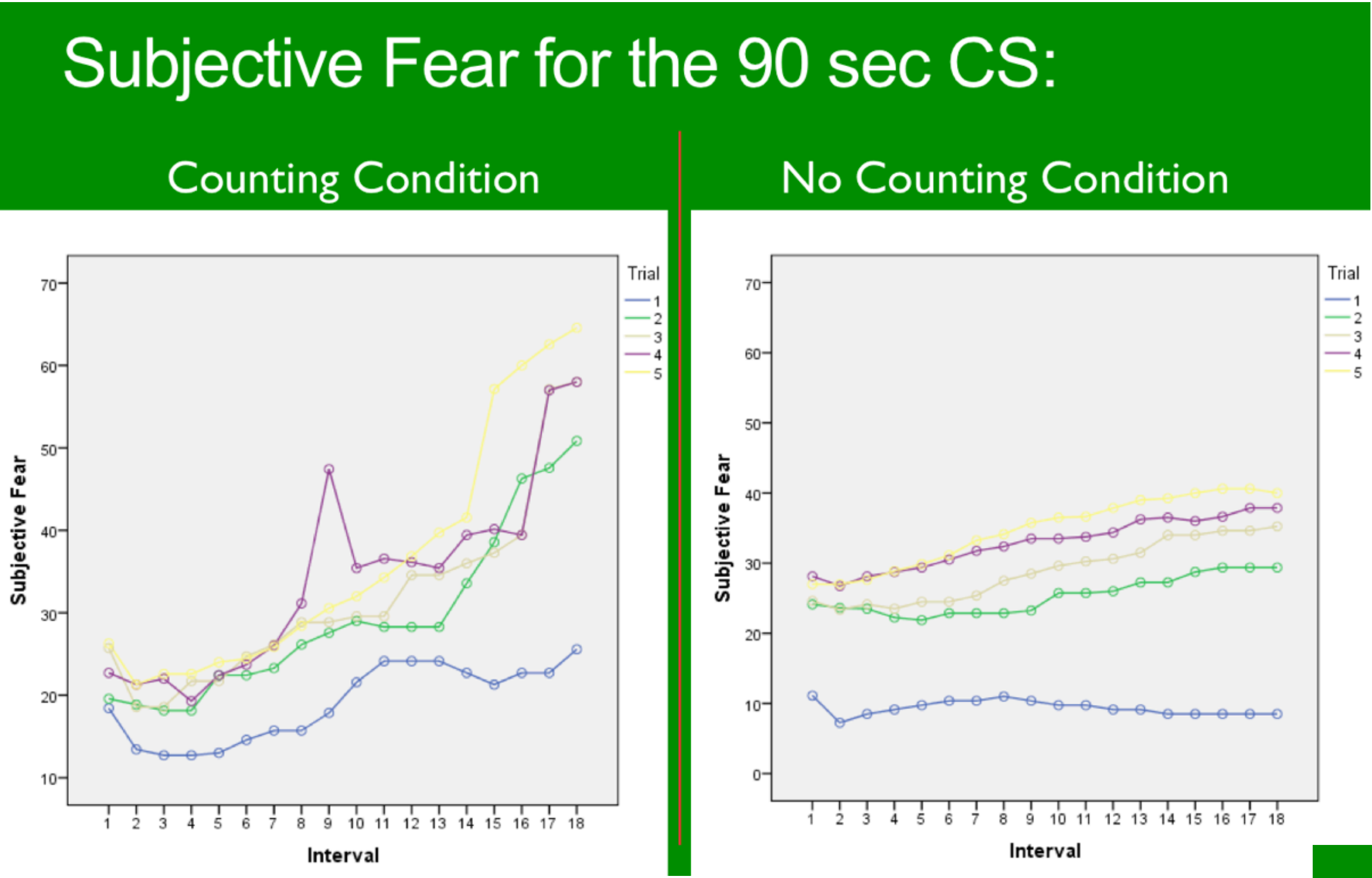
BACKGROUND

- * Research on time perception has demonstrated a strong effect of emotion on temporal judgments (Droit-Volet et al., 2009). Maybe in line with this, a subgroup of anxiety patients displays a premature onset of fear responding. Social anxiety disorder patients, for example, do not only display elevated fear during or right before public speaking, but already display this pattern while anticipating a public speech at a distant time in the future (Davidson et al., 2000).
- * An evidence-based protocol to study the temporal regulation of fear responding is lacking. Development of such protocol is necessary for future research.
- * The present study aims to set the parameters that produce adequate temporal regulation of fear responding: Low fear responding to the early time portions of an aversively conditioned stimulus (CS) and high fear responding to the late time portions of such a CS. Future studies can then investigate deviations from this adaptive pattern.

METHODS

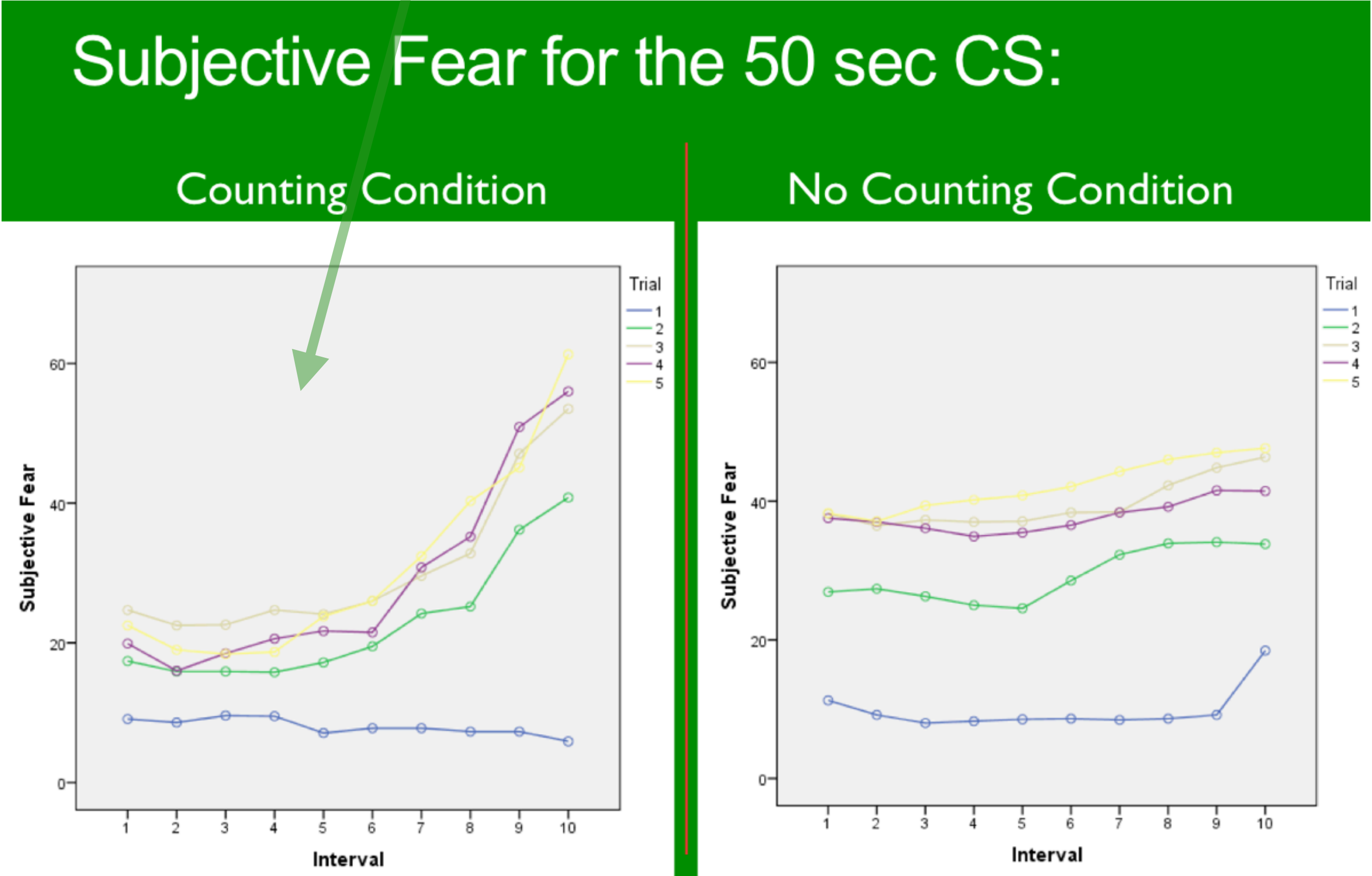
- * In healthy participants, we investigated the effect of:
 - 👤 CS duration (**90 seconds or 50 seconds**)
 - 🗣️ Verbal counting during CS presentations (**counting or no counting**)
- * Geometrical figures functioned as CSs and and electric stimulus functioned as unconditional stimulus (US). CS-US trials were presented **five times**.
- * Participants continuously reported their level of subjective fear (rating scale from 0 to 100) during CS presentations.

RESULTS & DISCUSSION



👤 Only with this combination of parameters, did we obtain the desired pattern *and* a significant trial by time interaction.

🗣️ During the last trials, there is a clear increase in subjective fear with time such that subjective fear is low during early time portions of the CS and subsequently reaches its maximum intensity toward the end of the CS.



- * Discussion:
 - 👤 Results favoured the protocol with the 50 seconds CS in which participants had to count for the duration of CS presentations.
 - 👤 In future studies, one could, for example, investigate whether anxiety patients show an earlier onset of fear responding than healthy individuals and how this could be remediated. Premature onset of fear responding in an aversive conditioning procedure would be a new laboratory model for worry.